ESPINOSA, JOSIAH J. BSIT 2-A

CREATE TABLE Authors (

author\_id INT AUTO\_INCREMENT PRIMARY KEY,

name VARCHAR(255) NOT NULL,

birth\_year INT

);

CREATE TABLE Books (

book\_id INT AUTO\_INCREMENT PRIMARY KEY,

title VARCHAR(255) NOT NULL,

author\_id INT,

published\_year INT,

genre VARCHAR(100),

FOREIGN KEY (author\_id) REFERENCES Authors(author\_id)

);

CREATE TABLE Members (

member\_id INT AUTO\_INCREMENT PRIMARY KEY,

name VARCHAR(255) NOT NULL,

email VARCHAR(255) UNIQUE NOT NULL,

join\_date DATE

);

CREATE TABLE BorrowedBooks (

borrow\_id INT AUTO\_INCREMENT PRIMARY KEY,

book\_id INT,

member\_id INT,

borrow\_date DATE,

return\_date DATE NULL,

FOREIGN KEY (book\_id) REFERENCES Books(book\_id),

FOREIGN KEY (member\_id) REFERENCES Members(member\_id)

);

INSERT INTO Authors (name, birth\_year) VALUES

('Author One', 1975),

('Author Two', 1980),

('Author Three', 1990),

('Author Four', 1985),

('Author Five', 1970);

INSERT INTO Books (title, author\_id, published\_year, genre) VALUES

('Book One', 1, 2010, 'Fiction'),

('Book Two', 2, 1999, 'Non-Fiction'),

('Book Three', 3, 2021, 'Science'),

('Book Four', 4, 2015, 'History'),

('Book Five', 5, 2005, 'Fantasy');

INSERT INTO Members (name, email, join\_date) VALUES

('Member One', 'member1@example.com', '2023-01-10'),

('Member Two', 'member2@example.com', '2022-06-15'),

('Member Three', 'member3@example.com', '2021-09-20');

INSERT INTO BorrowedBooks (book\_id, member\_id, borrow\_date, return\_date) VALUES

(1, 1, '2024-01-01', '2024-01-10'),

(2, 2, '2024-02-01', NULL),

(3, 3, '2024-02-10', '2024-02-20'),

(4, 1, '2024-03-01', NULL),

(5, 2, '2024-03-05', '2024-03-15');

SELECT \* FROM Books WHERE published\_year > 2000;

SELECT DISTINCT Members.\* FROM Members

JOIN BorrowedBooks ON Members.member\_id = BorrowedBooks.member\_id;

SELECT Books.title, Authors.name

FROM Books

JOIN Authors ON Books.author\_id = Authors.author\_id;

SELECT Books.title FROM BorrowedBooks

JOIN Books ON BorrowedBooks.book\_id = Books.book\_id

WHERE return\_date IS NULL;

SELECT Authors.name, COUNT(Books.book\_id) AS book\_count

FROM Authors

LEFT JOIN Books ON Authors.author\_id = Books.author\_id

GROUP BY Authors.name;